Comments—NBP Public Notice #17

JOINT RESPONSE OF THE TELEHEALTH ALLIANCE OF OREGON AND THE OREGON HEALTH NETWORK TO COMMENT SOUGHT ON HEALTH CARE DELIVERY ELEMENTS OF NATIONAL BROADBAND PLAN

Comments—NBP Public Notice #17; DA 09-2413
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The Telehealth Alliance of Oregon (TAO) and the Oregon Health Network (OHN) jointly respond to the above-referenced request for comments (see Appendix A for TAO and OHN background). Please direct any questions or comments to:

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The joint TAO and OHN response to the request for comments follows.

1. **IT Infrastructure to Support Healthcare Delivery.**

   Mapping

   Mapping the current state of internet connectivity is necessary to understand the extent of the gaps in the current connectivity.

   We, too, seek to better understand the state and countrywide connectivity of the following delivery settings:

   a. Hospitals
   b. Community health clinics and outpatient centers
   c. Physician offices
   d. Long-term care facilities
   e. Home
   f. Emergency Medical Responders
   g. Indian Health Service, Dept. of Health and Human Services, and other health service providers on tribal lands

   The initial issuance of the National Telecommunications and Information Administration (NTIA) State Broadband Data and Development Grant Program[1] contains the following provisions for data collection and would have provided the degree of granularity necessary to identify the connectivity of the above items (1.a-g):

   > "For each facilities-based provider of broadband service to specified end-user locations in their State, awardees shall provide NTIA with a list of all addresses at

[1] State Broadband Data and Development Grant Program, Notice of Funds Availability (NOFA), Federal Register /Vol. 74, No. 129 /Wednesday, http://www.ntia.doc.gov/frnotices/2009/FR_BroadbandMappingNOFA_090708.pdf, July 8, 2009

> which broadband service is available to end users in the provider's service area…"
>
> "…For this purpose, an ''end user'' of broadband service is a residential or business party, institution or State or local government entity that may use broadband service for its own purposes and that does not resell such service to other entities or incorporate such service into retail Internet-access services."[2]

The subsequent clarification[3] watered down this requirement:

> "In lieu of reporting address-specific data, Awardees may satisfy the requirements of this section of the Technical Appendix by providing NTIA, for each facilities-based provider of broadband service in their state, a list of all census blocks of no greater than two square miles in area in which broadband service is available to end users, along with the associated service characteristics identified in the Technical Appendix. For those census blocks larger in area than two square miles, Awardees must provide NTIA, for each facilities-based provider of broadband service in their state, either the address-specific data as described in the original Notice or a list of all street segments with address ranges in such census blocks, as contained within the U.S. Census Bureau's TIGER 4/Line Files or such other database of at least equivalent granularity, in which broadband service is available to end users, along with the associated service characteristics identified in the Technical Appendix."

The net result of this change in the rules for data collection means that we will not get the requisite level of detail to identify the status of healthcare delivery settings as set forth in items 1 a-g.

In a recent article[4] on the Broadband.gov website the following was pointed out:

> "Hospitals and clinics need to empower a range of applications such as Electronic Health Records, Diagnostic imaging and Tele-radiology. There is a connectivity gap within healthcare."

Recommendation

Revise or follow on the State Broadband Data and Development Grant Program process to provide the necessary level of granularity necessary to do solid planning to identify and to remove the gaps. To close the gaps we need to know exactly where they are. For too long we've relied on "guesswork" and anecdotal information.

[2] Ibid, State Broadband Data and Development Grant Program, Technical Appendix A, page 32557

[3] State Broadband Data and Development Grant Program Notice of Funds Availability; clarification, Federal Register / Vol. 74, No. 154 / Wednesday, August 12, 2009

[4] "Broadband Gaps in the Healthcare Sector," Mohit Kaushal, Digital Healthcare Director, http://blog.broadband.gov/?entryId=16384, November 25th, 2009

Infrastructure

Minimum broadband standard in all cases sufficient network quality to support IP voice (or other synchronous communication), End-to-end **Latency** (less than 150ms), **Jitter** (less than 30 ms), **and Packet Drop** (less than 1%)—healthcare services will need to work well if they are to be adopted.

Location	**Symmetric Bandwidth**
Hospitals	100mb minimum
Community Health Clinics	10mb minimum
Physician Offices	10mb minimum
Long-term care facility	10mb minimum
Home	10mb minimum (Interconnectivity to health network)
Emergency Medical Responder	10mb minimum
Indian Health Service Dept (Tribal Service Providers)	10mb minimum
Wireless	10mb Minimum if used in for the above purposes.

Any reasonable sized organization, e.g. a hospital or facility of over 15 staff, should have 100 MB or better service, therefore Fiber connectivity is a requirement for these sites. Any major organization, e.g. a health system or large hospital, etc. should have 1 GB.

The biggest issue with fiber and related network resources are the counter-productive rules governing use of public resources. Private resources are fine, just expensive. Public resources are typically unusable due to restrictions in acceptable use. Public networks cannot often interconnect natively with private networks nor can they carry traffic which has not been explicitly allowed by the funding authority. Broadband is by definition a multiple use technology. Narrowly segregating the usage generally means normal people simply can't use the service for anything. For example, Internet2 is not an open network; therefore, any service provided by Internet2 is of no use to a commercial healthcare provider or an eligible doctor working from home. State and municipal networks can have similar limitations.

Similarly, there is no meaningful distinction between urban and rural. If a site is eligible for subsidy based on the function they provide to society, they should get the subsidy. Too often the very rules which were originally designed to help rural folks are actually used to prevent them from getting service. Networks to be of value must connect everyone.

Architecture

In Oregon, we have solved a number of difficult problems surrounding inability to scale closed networks cost effectively. OHN is simply improving the Internet through judicious use of Internet Exchange Points, multi-vendor Quality of Service Level Agreements and a third party Network Operations Center (NOC) to validate quality and broker problem resolution. This way we can leverage existing infrastructure regardless of vendor, put in lowest cost service by region and still have the expectation that the whole thing will work together.[5,6]

[5] For questions about this approach, please contact Don Westlight, Manager Network Architecture, OHSU.EDU, 503-418-1081, westligh@ohsu.edu

[6] See also http://www.usac.org/_res/documents/rhc-pilot-program/pdf/search-postings/2008/Oregon-Health-scope.pdf In particular: Network Operations Center pages 11- 15, Service Level Agreement pages 15- 18 and Network Access Specifications pages20-23

2. **Connectivity Requirements to Support Health IT Applications.**
In all of the following instances an open network is required such that users access the required resources, and provide healthcare, education, and consultation; irrespective of public or private organization, of home, office, ambulance or hospital and of urban or rural locations.

- Electronic health records
- Real time video for Telehealth consultations and diagnoses
- Remote patient monitoring systems
- Mobile and other portable remote monitoring systems
- Other applications that enable or cause advanced healthcare delivery

In all of the above cases a network which supports IP voice (or other synchronous communication) is required with Jitter, Latency, and Packet Drop meeting the specifications laid out in question 1 above.

To succeed, this will be a network of networks which must directly peer with one-another at regional Internet exchange points. The United States of America has a great number of public and private networks already in place. Rather than creating more networks, the idea is to interconnect them better, improve service quality within each through tighter service level agreements and then use the most expedient and cost effective vendors for expansion on a geography by geography basis.[7]

iv. Cloud Computing
Cloud Computing is not ready for healthcare for two reasons:

- Chain of Accountability
- Insufficient Infrastructure

Instead, we need to think of *confederation*—don't replace what is there, simply interconnect it with a mesh of new relationships. Functionally this can grow to use classical "Cloud Computing" technologies but the people who are in charge of the data today, still need to be in charge of the data; it just needs to be more generally accessible.

3. **Health IT Value Capture & Use Cases.**
Oregon can share two examples of the value of telemedicine applications:

Example 1
Grand Ronde Hospital is located in La Grande, Oregon, approximately 250 miles from Portland and 200 miles from Boise Idaho. Since mid-2008 Grande Ronde Hospital has been providing telemedicine services in the area of advanced ICU care. In the fourth quarter of 2008 they performed 19 patient encounters (an average of 12/month). In October of this year the number of encounters had increased to 31 in one month. Many of the patients that were seen using telemedicine technologies were able to stay in La Grande at Grand Ronde Hospital while at the same time receiving specialty care from physicians in Boise, Idaho. Not only did this save an average of $24,000 per case in transport costs, it also kept the health care dollars in the local community and eliminated the costs and inconvenience to the family of the need to travel. In eight cases Grand Ronde Hospital was able to provide the opportunity for a new mother who had to remain at Grand Ronde to "see" their critically ill newborn who was transferred to the NICU at St. Alphonsus Hospital in Boise, Idaho using video conferencing technologies.

[7] See also http://www.usac.org/_res/documents/rhc-pilot-program/pdf/search-postings/2008/Oregon-Health-scope.pdf. In particular: Network Operations Center pages 11- 15, Service Level Agreement pages 15- 18 and Network Access Specifications pages 20-23.

Example 2

Oregon Health & Science University (OHSU) Doernbecher Children's Hospital (DCH) has one of the two 2 pediatric ICU's in Oregon. Between Doernbecher and Legacy' Health System's Emmanuel Children's Hospital, there are only 13 pediatric intensivists and 36 PICU beds to support Oregon's large geographic referral area. DCH receives over 800 pediatric referrals per year. In April or 2007, DCH began providing PICU consults to Sacred Heart Medical Center in Eugene (approximately 100 miles away). The intent of the program was to remove distance barriers to improve access to care and to allow as many patients as possible to remain at Sacred Heart for their care with support from DCH pediatric intensivists using telemedicine (video conferencing) technologies. Since April of 2007 DCH has performed 56 consults which resulted in 16 patients remaining at Sacred Heart for their care. In each case DCH's pediatric intensivists were able to continue to provide support to the physicians at Sacred Heart and to effectively communicate with the patient's family through the use of video conferencing. This not only eliminated the need for the family travel to Portland and kept the local healthcare dollars in Eugene it saved an average of $6,000 per patient in transport costs. Additionally, it insured that the limited number of PICU beds in Oregon were available for those patients that truly need them.

4. Health IT Use Drivers & Barriers.

a./b. Primary drivers and barriers/disincentive to invest in broadband services

There are several factors that provide a barrier to medical facilities adopting and utilizing available network connectivity. One factor is the lack of knowledge with regards to the business value that the added bandwidth can provide. Many clinics fail to realize the full value of the medium and therefore see it as an expense rather than a way to increase revenue and provide better care while keeping patients in their own facility.

Another significant barrier is the lack of widespread usage of telemedicine. One major flaw of the federal subsidies is the lack of support for the "for profit" sector. The true value of these networks will never be realized unless we can bring in both the private sector as well as the non-profit sector. This can be accomplished by providing tax incentives and subsidies for some for-profit entities as well as the non-profits. The success or failure of these programs will largely depend on the level of participation they receive. With enough participants there will be sufficient usage to provide competition between vendors to provide lower costs for the equipment and resources needed to provide these services. This in turn will allow the usage of telemedicine to become universal and therefore ensure that all facilities that have access to adequate bandwidth will in fact take advantage of it.

The primary driver for the use of available bandwidth will come from the adoption of telemedicine. In other words the more clinics that use it, the more incentive there will be for other medical facilities to adopt it. This again goes back to the previous statement that we need to do more to get the private sector involved. We can also work to extend the submission deadlines for the RHCPP programs to make sure we can get as many facilities involved as possible.

4. c. i. Electronic Health Records

The true driver for this technology at the moment comes from the medical community and a physician's need to be able to access an accurate patient history regardless of how many times the patient has moved or if he or she remembers the name a location of any of their previous physicians. The primary barrier is the lack of a national system to facilitate the locating and transferring of these records. In order for Electronic Health Records (EHR's) to be effective we must facilitate their access on a nationwide scale.

The general lack of public knowledge towards the benefits of these EHR's is yet another barrier that needs to be overcome. We need to work to educate the public as to the true benefit of giving a

physician the ability to bring up a patient's entire medical history regardless of how many times that patient may have moved over the years.

4. c. iv./v. Mobile and other portable remote monitoring systems

Other applications that enable or cause advanced healthcare delivery The primary barrier for these technologies is cost. Most insurance providers will not cover them due to the expenses involved. This is the same barrier most patients face. Another challenge is the lack of reliable network connectivity in many of the rural area of the country. Many of these technologies must remain in constant contact with their monitoring system to provide life saving benefits and this is just not feasible at this time for the majority of potential patients that reside outside of major metropolitan areas or travel to an area without adequate coverage.

The primary driver for this technology will come from the reduction in the cost of the technology. This reduction will occur naturally in the market place as more people adopt it. Insurance companies will become more friendly towards these technologies as their cost lowers and studies come out that prove the abilities of many new technologies to save them money in the long run. This will occur by catching potential life threatening conditions before they require emergency care. A good example of this are the systems that monitor a patient's blood pressure, heart rate, etc. and provide this real time date to a 24 hour monitoring system that will alert the patient should there be any irregularities. These systems allow a patient to receive treatment for a heart condition or potential stroke before it strikes. The savings to the insurance company would be extensive and the value of saving a life, priceless. The government can also help to push this process along by providing tax incentives and subsidies for some of these new technologies and for the networks needed to make them effective.

4. d. Does connectivity have an effect on Health IT adoption?

Yes! This is especially true in a rural setting where access to a broadband connection is not always available. In order to take advantage of any of the above technologies you need a broadband network with sufficient capacity (10 MB synchronous as a minimum). In addition to the capacity you also need to maintain a high level of Quality of Service (QOS) in order for the technologies to function in a clinical setting. Redundancy is also a factor. These technologies will be used in life and death situations so we must be absolutely confident in their reliability. This is a huge challenge for most rural communities. Many are lucky to have a single fiber loop in place, much less a second redundant loop and a network with a high level of QOS. In a rural setting it will largely be left to the federal government to help subsidize the build out of these networks since the client base is just too small to make it a profitable venture for a local service provider.

In a metropolitan setting it is easier to find the redundancy needed but achieving the QOS required for these applications will still be a challenge, as will the costs associated with such a connection. Lastly we need a way to facilitate and maintain that high QOS over a mesh of interconnecting networks run by a variety of service providers. This is what makes the Oregon Health Network unique. We have overcome those barriers at a state level by maintaining a high level of QOS throughout the OHN network through stringent SLA contracts. We then maintain the QOS requirements through an independent Network Monitoring System that can view the mesh of networks as a whole and work to locate any disruptions and thereby maintain the QOS throughout the entire network or networks. This model could be scaled to support connectivity nationwide and would remove a huge barrier to the adoption of the above technologies.

5. Data Security in Health IT.

Small sites will likely have HIPAA agreements with multiple service providers (e.g. larger hospital systems, electronic healthcare record service providers, consulting physicians, various geographical areas nearby, etc.)

It follows that they will need to manage Virtual Private Network encryption to multiple sites. Small sites don't typically have IT support staff to manage multiple encrypted channels, or connectivity which can support this.

Every organization which owns or maintains patient health-care-records, should be required to interface (e.g. federate) with a national standard interface (HL7 or whatever) such that this data can be made available [fee to be determined] to other providers treating the patient. When the patient returns, the new information can be accessed by the primary care physicians.

6. Universal Service Rural Health Care Support Mechanism and Rural Health Care Pilot Program.

a. Questions Relations to the Rural Health Care Support Mechanism

i. Nationwide Connectivity

The RHC program needs to interconnect with other networks. But Internet2 is a closed network and unable to work with commercial healthcare providers or networks which service both commercial and public organizations. Either open RHC to general Internet backbone providers who meet the SLA or make Internet2 a general Internet backbone. The requirement to hook to Internet2 discourages the use of general purpose networks even when these could otherwise meet the requirements of the program and which are typically the lowest cost in region.

ii. Impediments:

There are a number of core impediments to making the RHCPP successful nationwide:

- **Complex Application Process**

  The application process continues to be complex, cumbersome and frustrating, and discourages many rural hospitals and other eligible health care providers from taking advantage of the program's benefits. While the process has been made somewhat easier through use of on-line forms, it still requires a Health Care Provider (HCP), telecommunications carrier(s) and the Rural Health Care Division (RHCD) to complete a multi-step process that is extremely cumbersome and very time-consuming. If a mistake is made inadvertently on an application form, the process to correct the mistake is time consuming and frustrating. And because of the complex process, completion of the appropriate forms by the telecom providers can be delayed, which in turn delays the subsidy putting an unfair financial burden on the HCP. Additionally, the health care provider has to reapply for support every year, even though they may have signed a multi-year contract with the telecom provider. The impact is that each year the subsidy is suspended for the length of time it takes the HCP, telecom provider and RHCD to complete the process, which again can put an unfair financial burden on the HCP. For cases where a multi-year contract has been signed after a competitive bid process, the RHCD should develop a simplified process where the applicant and the telecommunications provider can indicate and attest to the fact that no change in service has occurred and that the service is still eligible for universal service discounts.

- **Limited use of the connection**

  The current program limits use of the connection to a narrow subset of broadband uses. Many sites cannot afford two services; therefore many sites forgo the program and remain underserved.

- **Time**: **need to extend deadline**
  Understanding, trust and commitment are not built overnight; particularly, during times of great economic stress and budget uncertainty, like now. The needed relationships and trust take time to build through influence and demonstration (showing them how it works). We are only able to fully demonstrate the benefits of the RHCPP as each RFP roles out. Getting a site on the network, from LOA to FCL, is a process proving to take upwards of 3-6 months to complete. Due to the challenges of launching RHCPP and its processes and procedures, the Oregon Health Network's 1st FCL was not issued until May 2009.

- **Many Times "Free" or Low-cost Doesn't Sell**
  For successful broadband and health information technology adoption, it's about trust and getting our entire state (and nation) to pull together towards the same vision. Many times, we're working with individuals, organizations and agencies who have never worked with each other before. This innovation and collaboration, while challenging, in the end may well prove to be one of the most impactful and most rewarding outcomes of the RHCPP.

- **Rural Outreach & Weather**
  Add to the trust and proof factor is the Oregon issue of weather. Winter is fast approaching, and our ability to get out and reach the communities of greatest need, proves to be even more challenging for the very rural communities we're charged to serve. For RHCPP's in large rural states like Oregon, outreach (travel and relationship efforts) takes even more time. And it is becoming clear that with the June 30, 2010 deadline—time is what we do not have.

- **Pressure on New Pilot Programs/Infrastructures**
  Critical to the success of each RHCPP program is having an operational infrastructure capable to support and effectively service the RHCPP sites, sustainably. The RHCPP does not cover the costs required to do so. Therefore, in addition to raising the required matching funds, each RHCPP is required to also raise 100% of the operations costs not covered through the RHCPP. While many RHCPP projects have the advantage of being part of pre-existing structures (universities etc), many like OHN, have started from the ground up with a staff of 2-5 and a herculean volunteer network. While RHCPP staff and volunteers are some of our nation's brightest and most committed, the effort to launch and sail a $20.2 million dollar operation as a start-up organization is an undertaking of enormous magnitude, whoever you are.

- **2nd Rounds of Sustainability Plans**
  In addition to the plan included in the original applications, RHCPP's are required to get a final plan approved before funding is issued with no clear requirements, definitions or FCC guidance.

- **Burdensome/slow policies & procedures including highly manual/paper-centric processes.**

- **No incentives placed upon other government agencies/programs to leverage RHCPP infrastructure** means there is a high likelihood of RHCPP being overlooked during national broadband HIT initiatives (ARRA).

iii. Telehealth & Telemedicine Leveraging:
There are several ways in with the FCC could/should and best leverage the RHCPP.

- **More time to help educate and share the burden of changing *behavior*:**
  Health Information technology (HIT) expects and requires people, organizations and communities to change behavior; the costliest and most time-ladened of business challenges to overcome. The RHCPP's are not only required to find ways to collaborate/integrate their pilot networks into the State's plans but currently carry the greatest amount of risk in addressing this critical element of successful reform as defined by the project. This reality also underscores the importance of giving the current RHCPP's as much time as possible to do this effectively, efficiently and as affordably as possible.

  Even with the proposed 1-year extension approved, an immense level of pressure is being placed upon all pilot program recipients to **educate** communities and institutions (many laggards) on the need and urgency for them to invest time, money, expertise that encourages meaningful use in their HIT initiatives. Saying that this challenge is an overwhelming burden is an understatement. Outside of a nation-wide mind-shift required to make this happen, it requires **time**, money and the support of the entire health care ecosystem to do so. Time (June 30, 2009), money (no operations funds) and support (coordinated education/assistance from all state/federal/regional agencies) is not what any of the RHCPPs have. Most are staffed partially and highly volunteer driven. These are pilot programs not proven state/federal/regional solutions; yet in essence, they've been given the pressure TO be.

  By expanding the deadline 1 year, and by having the FCC do its part to open doors (co-educate) at least with state/regional government agencies and the press, RHCPP's have a much greater chance to effectively reach, educate and earn the trust of local communities and key influencers to change the way individuals and institutions think, behave and work with each other. This issue and challenge goes far above and beyond providing shared cost reimbursement for installation and monthly recurring charges. It's about changing our nation's view on health care, incentives, reimbursement, certification, true collaboration; playing catch-up technology wise, and putting our money where our mouth is as citizens, patients, professionals, public stewards, and communities and together as a nation.

- **State & National HIT Plan that Incorporates the RHCPP Infrastructure:**
  Critical to changing behavior is in helping the states come up with state HIT plans that integrate into the over arching national broadband and HIT plan, so that the RHCPP's can better understand how their programs and networks can/should plug **into** those overarching plans instead of vice versa. Conversely, the states should be educated and incentivized through the education/support/incentives of the FCC and administration to find ways to leverage the RHCPP's. This very large effort should be worked from both sides. Currently, however, the small non-profit RHCPP's with far less political influence than the FCC or the current administration share the sole burden of influencing core change and inter-administration collaboration within the political infrastructure. A shared tops-down, bottoms-up change model would best compliment the expeditious and effective use of the RHCPP infrastructure and nation's broadband HIT initiatives. If the RHCPP's don't receive this level of support, there is a very large possibility that ARRA braodband/HIT and Health Information Exchange (HIE) initiatives will over-build on top of the RHCPP infrastructure and undermine the viability of these RHCPP funded networks.

- **Provide program flexibility:**
  Allow any federally funded program whether Tribal, RHC, FCC, ARRA or whatever to use the broadband services for whatever is required in pursuit of the organization's mission.

iv. Program Evaluation:

Evaluate RHCPP's based upon how they leverage anchor tenant models to ensure the greatest current/future adoption of HIT as it relates to lowering the cost of last mile connectivity in surrounding communities. Other evaluation considerations include:

- Metrics first tier:
  - End-to-End Network Quality (Jitter, Latency, Packet Loss)
  - Adoption Rate (measures program bureaucracy)
  - Number of failed RFPs, Programs, Sites, Vendors.
  - Diversity of regions served
  - By region - Cost per unit site (one time, ongoing)
  - Per capita - number of sites served by region
  - By program and region: users for whom end of subsidy = loss of service

- Metrics second tier:
  - Transactions / Consultations / Classes (work product metrics)
  - Application Types used: Video, Imaging, Health Record, etc.
  - Customer Satisfaction
  - Per capita by region: miles of fiber built
  - Per capita - Percentage of segment served (clinics, etc…)
  - By region Internet Exchange Points & participating Vendors

v. Urban Areas:

Current definitions of "rural" and "urban" rarely align with the realities (need and opportunities); at least in the State of Oregon. The Rural Health Care Pilot Program serves both urban area non-profits on rural areas, yet the program itself only uses the classification of "rural" in its name. This has proven to cause more confusion in selling the RHCPP to urban and rural communities than it's helped. And if anything, greatens the divide in how urban and rural communities think and work together to maximize the infrastructure and ultimately improve the outcomes of patients they're all charged to serve.

OHN's vision statement directly addresses this issue in that we consciously did not include the clarification/designation of "urban" or "rural" in our quest to improve the quality, delivery and access of care to all Oregonians—*regardles*s of where they live. If we are all effective and successful (regional, state and national level), these classifications no longer are relevant or pertinent to the cause and intent to improve health care and health care education access and delivery.

By effectively and efficiently mapping, deploying and supporting (financially, strategically, politically and otherwise) a quality broadband network nationwide *network-of-networks*, the focus and effort of the RHCPP should be to prioritize and support anchor-tenant communities that are geographically dispersed in every state. This anchor tenant model (hospitals, community colleges/schools, government services etc.) should then be incentivized to reach out into their local communities to build local/regional partnerships to expand the use and adoption of broadband innovation and best practices. It is only through urban and rural anchor tenants that the value of the nationwide network is founded and who ultimately benefit from better outcomes.

Random and loose definitions of urban and rural designations and programs that serve those definitions are ineffective and result in wasted time, effort and diminished results.

The current definition of rural is confusing and restrictive. Under the current rule:

> "Whether an area is ``rural'' is determined by applying the following test. If an area is outside of any Core Based Statistical Area (CBSA), it is rural. Areas within CBSAs can be either rural or non-rural, depending on the characteristics of the CBSA. Small CBSAs—those that do not contain an urban area with populations of 25,000 or more—are rural. Within large CBSAs—those that contain urban areas with populations of 25,000 or more—census tracts can be either rural or non-rural depending on the characteristics of the particular census tract. If a census tract in a large CBSA does not contain any part of a place or urban area with a population greater than 25,000, then that tract is rural. Alternatively, if a census tract in a large CBSA contains all or part of a place or urban area with a population that exceeds 25,000, then it is not rural."

In an attempt to eliminate confusion, USAC has posted a list of eligible rural areas by state, but it is still cumbersome and somewhat confusing to use. Many of Oregon's counties that contain a town of 25,000 or more still lack adequate access to specialty, and sometimes even primary healthcare. As an example, in Oregon in the case of pediatrics specialty care that is primarily available from the two urban pediatric health systems located within five miles of each other in the Portland area. Patients needing access to these services typically have to travel up to 3 hours, and sometimes longer, in order to see a specialist. Access to this care through telemedicine eliminates the travel time and expense, the delay that may occur in receiving care, and allows for a continuum of care that is otherwise difficult to accomplish.

While the subsidy offered to "rural" providers and hospitals **that need the care** may encourage them to join the health network, their urban partners **who can provide the care** may choose not to join unless they are also incentivized. It is imperative that our urban health systems participate in Oregon's statewide health network so that they can expand access to services to insure that quality healthcare is available regardless of location.

Establishing eligibility for subsidy based upon CBSA designation also sets a false assumption that a healthcare provider or facility located in a town of 25,000 or more has access to and can afford the high-speed connectivity necessary to participate in telemedicine services. Subsidy should be available to any facility engaged in the delivery of healthcare regardless of location, with some established criteria to ensure that priority goes to those with the greatest need and the least ability to pay.

The OHN and TAO recommend that the rural/urban distinction be eliminated, and that any healthcare provider and/or facility participating in the delivery of health care be eligible for subsidy regardless of location.

6b. Questions Relating to the Pilot Program:

iii. Impediments.

We echo the comments from the Internet2 response:

- Despite the complexity of many of the projects, no money was to be allocated for project management.
- Additionally, after the program started the FCC announced that it would require an "acceptable" sustainability plan before any funds would be allocated or a funding commitment letter (FCL) would be issued. No guideline was provided to

as to what was an acceptable sustainability plan.

- Some approved projects self-provisioned and budgeted for their network design studies. However FCC/USAC is requiring that they obtain a SPIN and competitively bid for the work they had planned, outlined and budgeted to do in their proposal. This requirement posed burden for projects that included this in the already approved proposals.
- Detailed Quarterly Progress Reports have been required of all selected participants starting Q4 2007 even when they have received no funding to start their project. This cost is considered project administration, which is not an allowable expense, adding to the burden and project management costs.

iv. Extension of the Pilot Program:
This is a critical "opportunity" and step for the FCC's RHCPP to best utilize the $417m investment it seeks to improve the nation's broadband health care infrastructure; specifically as it relates to broadband/HIT adoption and improved outcomes. All the current RHCPP's would benefit from the extension as only 17 of 62 projects (Oregon) have had their sustainability plans successfully approved and funding commitment letters (FCL's) issued. Given the rough start of this program, it makes more sense to better support the existing / approved RHCPP applicants (62 in total) than in allowing more programs to apply.

v. Other Suggested Changes:
In terms of additional requirements and those that should be set aside to make that final year the most effective, we recommend implementing/prioritizing/supporting the following:

- **Leverage and require anchor tenant models expand to for-profits:**
Many times, the qualification of RHCPP's being only non-profit doesn't work. Many times small, for-profit clinics are the anchor tenant of the community and critical to use and adoption of the RHCPP subsidy and core objective. They need to be eligible for RHCPP funding. This modification would be a critical success element in working with communities with non/for-profit models and maximizing the momentum developed to date through the RCHPP's.

- **Difference between pilot program and proven business model:**
The Rural Health Care Pilot Program was designed to be a *pilot* program, not a proven business model. Through the RHCPP, the FCC wanted applications from states and communities to be creative, courageous and to take chances with their network architecture designs and business models; testing assumptions on what works and what doesn't for the FCC to learn from and leverage in a better more integrated nationwide BB HIT plan. Yet in reality, the process and pressure placed upon these small, volunteer-driven pilot start-up programs to educate, influence, administer/manage and financially support these 10 – 25 million dollar broadband operations—matching and all operations costs—from start to finish in a 5 years has proven unrealistic at best and uncharacteristic of a true pilot program. The FCC should find ways to better share the risk.

- **Shortening time-frame of bringing on qualified sites & going paperless:**
Even with those 17 of 62 RHCPP's having their sustainability plans approved and a handful of FCL's approved, the process of moving a qualified RHCPP participant through the process has proven to take upwards of 3- 6 months. Outside the realities of having sites lose interest in that time-frame and leave the process mid-stream, the June 30th deadline proves even more detrimental to the program's real and perceived success. Any effort to reduce the approval/admin process by 50% through streamlined approval processes and integrated MS Sharepoint solutions would be highly beneficial.

- **Go paperless:**
  Currently the process/procedures used by the FCC/USAC to administer the process is a highly manual process which means duplication of effort, increased opportunity for errors, significant waste of time and effort for the FCC/USAC, the RHCPP's, the sites and the vendors. Electronic signatures are currently not accepted, and should be. Additionally, OHN has developed a secure/easy and cost effective integrated MS Sharepoint that could be used for all forms submission/review/approval and invoicing that could easily be shared with USAC and other programs, if the FCC is interested in pursuing.

Appendix A—Telehealth Alliance (TAO) and Oregon Health Network (OHN) Background

Telehealth Alliance of Oregon[8]

The Telehealth Association of Oregon (TAO) is 501(c)(3) with a vision of *"Quality Healthcare Everywhere though telecommunications."* TAO was instrumental in the development of the Oregon Health Network.

The TAO has adopted five objectives as the "pillars" for guiding the organization's initial services and action plan. They are to:

- **Improve access** to high quality health care and other allied services through telehealth and telemedicine.
- **Promote collaborations** that advance telehealth and telemedicine as a means for improving the delivery of affordable high quality health care.
- **Provide and promote education** to facilitate the understanding of the possibilities and uses of telehealth and telemedicine.
- **Provide and support technical assistance** to initiatives that advance programs of telehealth and telemedicine in Oregon.
- **Promote research** that supports appropriate decision-making in the delivery of health care using technology and telecommunications.

Program efforts include but are not limited to:

- Developing specific resources, including the acquisition of equipment and infrastructure, needed to provide a broad array of telehealth services to Oregonians;
- Providing a vehicle for organizations and practitioners to aggregate demand for purchasing telecommunications services to gain the benefits of economies of scale necessary to make telehealth services affordable;
- Providing technical and research assistance to aid organizations, agencies and providers in making decisions about their technology and telecommunications services needs and in planning to acquire these services;
- Investigating and studying conditions and possibilities that will result in the removal of barriers to telehealth services providers in serving Oregonians;
- Assembling and coordinating information relative to the status, scope, cost and possibilities of improving telehealth services in Oregon and reporting such information to the health care community, state policy makers, and the telecommunications services community;
- Publishing, disseminating and distributing information and statistics acquired on the impacts of the improvements, or the lack thereof, of telehealth services in Oregon; and
- Cooperating with health care providers, payers, telecommunications providers, planning agencies and policy makers for the purpose of promoting collaborations to improve access to and delivery of telehealth services.

Membership in TAO is open to anyone interested in supporting the purpose and goals of the organization. If you are a telehealth service provider, an organization interested in providing telehealth services, a supplier of equipment, software or transport for telehealth service, a healthcare insurance provider or someone interested in improving healthcare through telecommunications.

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[8] http://www.ortelehealth.org/)

Oregon Health Network[9]

The Oregon Health Network (OHN) is a 501(c)(3) with a vision that *"All Oregonians have access to the best possible healthcare regardless of location."* The OHN mission is *"to ensure the highest quality of care for all Oregonians through an enhanced telehealth network, education, technological innovation and state-wide collaboration."* Within that mission OHN has two primary objectives:

- Build (connect) and support a scalable, cost-effective, high quality broadband infrastructure needed to ensure that all Oregonians have equal access to the best possible health care regardless of their location.
- And upon full realization, interconnect all Oregon hospitals, clinics, public health offices, physicians, mental health, dental and optical clinics, and health education institutions with a level of interactive service delivery and access to resources only imagined in our rural and underserved communities.

OHN's most immediate goal is to bring low-cost, high-speed broadband to all primary healthcare stakeholders in Oregon. From that critical foundation, our State's telehealth and education programs can be built or thrive.

The organization was launched in large part due to the FCC's five-year Rural Health Care Pilot Program (RHCPP). OHN has clarified a five-year phased growth strategy to not only meet the requirements of the FCC, but to ensure the continued growth and viability of the OHN and its participants at the conclusion of the RHCPP come May 2014.

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[9] http://www.oregonhealthnet.org/